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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/572,885	03/20/2006	Herve Jean Francois Marie	FR03 0106 US1	3346

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NXP, B.V.
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EXAMINER

NGUYEN, LEE

ART UNIT	PAPER NUMBER
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2618

NOTIFICATION DATE	DELIVERY MODE
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10/10/2008

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ip.department.us@nxp.com

Office Action Summary	Application No. 10/572,885	Applicant(s) MARIE, HERVE JEAN FRANCOIS	
	Examiner LEE NGUYEN	Art Unit 2618	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7 is/are pending in the application.
4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6 and 7 is/are rejected.
- 7) ☒ Claim(s) 5 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 20 March 2006 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Priority

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Information Disclosure Statement

2. The IDS filed 3/20/06 has been considered and recorded in the file.

Drawings

3. Figures 1-2 should be designated by a legend such as --Prior Art-- because only that which is old is illustrated. See MPEP § 608.02(g). Corrected drawings in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

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(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148

USPQ 459 (1966), that are applied for establishing a background for determining

obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

6. Claims 1-2, 4 and 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Souetinov (US 7,016,664) in view of Bastani et al (US 6,157,822).

Regarding claim 1, Souetinov teaches a signal processing circuit 51 (Fig. 5) intended to be stacked with two mixer circuits 52, 53, said signal processing circuit 51 being intended to receive a pair of input signals (RFP, RFN) in phase opposition on two input terminals (RFP, RFN) and to provide two pairs of output currents (2I_o) in phase opposition on four output terminals (TP3-TP4, TP5-TP6, TP7-TP8, TP9-TP10) intended to be connected to said two mixer circuits 52, 53 in order that each mixer circuit 52, 53 receives one pair of output currents I_o in phase opposition, each input signal RFP, RFN being amplified by a respective low noise amplification unit (TP1-TN1, TP2-TN2) and being split by a respective splitting unit (TP3-TP4, TP5-TP6, TP7-TP8, TP9-TP10), characterized in that each of the two splitting units includes two branches 2I_o connected between the respective amplification unit (TP1-TN1, TP2-TN2) and one of the four

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output terminals (TP3-TP4, TP5-TP6, TP7-TP8, TP9-TP10). Souetinov fails to teach the four branches each including at least an impedance having identical characteristics.

Bastani et al teach that an impedance 207 (Fig. 4) is implemented between the transconductor 203 and the Gilbert mixer 105. It would have been obvious to one having skill in the art at the time the invention was made to include the impedance of Bastani et al into the radio communication device circuit of Souetinov in order to efficiently match the output impedance of the transconductance amplifier to the input impedance of the mixer.

Regarding claim 2, the value of the resistance is not given weight because it simply expresses the intended result (See MPEP 2111.04). Secondly, this functional limitation is inherently found in Bastani et al's impedance (See MPEP 2114).

Regarding claim 4, Souetinov also teaches each of the two amplification units TP1-TN1 and TP2-TN2 includes at least one amplification transistor TP1-TN1 and TP2-TN2, of which the gate terminal is connected to one input terminal RFP and the drain is connected to a respective splitting unit (TP3-TP4, TP5-TP6, TP7-TP8, TP9-TP10), see Fig. 5. It is obvious to one having skill in the art the gate and drain of the MOSFET transistor corresponding to the base and the collector of the BJT transistor. It would have been obvious to one having skill in the art at the time the invention was made to replace the MOSFET transistors of Souetinov with the BJT transistors dependent on specific application.

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Regarding claim 6, Souetinov also teaches that the circuit is implemented in radio communication device (Col. 3; ll. 41-52), which inherently include a receiver. The receiver includes at least a signal processing circuit 51 and two mixer circuits 52, 53 receiving local oscillation signals in phase quadrature QLON, ILON (Fig. 5), said output terminals of said signal processing circuit being connected to said mixer circuits in such a way that each mixer circuit receives a pair of signals that are in phase opposition (See the rejection of claim 1). Souetinov does not explicitly teach that the receiver is implemented in a chip. It is taken official notice that the art implementing a receiver circuit with an IC chip is conventionally well known. It would have been obvious to one having skill in the art at the time the invention was made to implement the receiver of the Souetinov with an IC in order to reduce size of the receiver.

Regarding claim 7, Souetinov inherently teaches at least an antenna and a reception chain as claimed (radio communication device; Col. 3; ll. 41-52).

7. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over Souetinov in view of Bastani et al as applied to claim 1 above, and further in view of Rokos (EP 0434203) submitted by Applicant.

Regarding claim 3, the combination of Souetinov and Bastani et al fail to teach that each of the four branches further includes a cascode transistor, bases of said four cascode transistors being connected together. Rokos teaches that each of the four

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branches T1-T4 further includes a cascode transistor T13-T16, respectively, bases of said four cascode transistors T13-T16 being connected together (Fig. 3). It would have been obvious to one having skill in the art at the time the invention was made to include the cascode transistors of Rokos into the radio communication device circuit of Souetinov in order to improve isolation inputs to the mixer.

Allowable Subject Matter

8. Claim 5 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Regarding claim 5, the prior art of record fails to teach that each of the two amplification units includes at least an amplification transistor, of which the base is connected to one input terminal and the collector is connected to another transistor in cascode, said transistor in cascode being connected by its collector to a respective splitting unit and being connected by its base to the transistor in cascode of the other amplification unit.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LEE NGUYEN whose telephone number is 571-272-7854. The examiner can normally be reached on 8:00 - 4:30.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, NAY A. MAUNG can be reached on 571-272-7882. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

LEE NGUYEN
Primary Examiner
Art Unit 2618

/LEE NGUYEN/
Primary Examiner, Art Unit 2618